The opinion in support of the decision being entered today is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOSEPH CARRABIS

Appeal 2007-1598
Application 10/071,731
Technology Center 2100

Decided: September 27, 2007

Before JOHN C. MARTIN, ANITA PELLMAN GROSS,
and MAHSHID D. SAADAT, *Administrative Patent Judges.*

GROSS, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Carrabis (Appellant) appeals under 35 U.S.C. § 134 from the Examiner's Final Rejection of claims 1 through 18, which are all of the claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

Appellant's invention relates generally to programmable devices for customizing an individual's environment. See Specification 1:4-6. Claim 1 is illustrative of the claimed invention, and it reads as follows:

> 1. A method of obtaining information regarding an environment for an individual, having preferred modalities and engaged in activity, using a programmable device, said method comprising the steps of:
>
> sensing at least one psychomotor behavioral element of the activity engaged by the individual; and
>
> determining the preferred modalities of the individual based on the psychomotor behavioral element of the activity engaged by the individual.

The prior art references of record relied upon by the Examiner in rejecting the appealed claims are:

Breese	US 5,987,415	Nov. 16, 1999
Mizokawa	US 6,230,111 B1	May 08, 2001

Claims 1 through 18 stand rejected under 35 U.S.C. § 103 as being unpatentable over Breese in view of Mizokawa.

We refer to the Examiner's Answer (mailed December 11, 2006) and to Appellant's Brief (filed October 30, 2006) and Reply Brief (filed February 12, 2007) for the respective arguments.

SUMMARY OF DECISION

As a consequence of our review, we will reverse the obviousness rejection of claims 5 and 7 through 9 and affirm the obviousness rejection of claims 1 through 4, 6, and 10 through 18.

OPINION

Appellant contends (Br. 14) that the references fail to teach determining preferred modalities of the user. Appellant contends (Br. 16) that Mizokawa discloses "recognition of emotion and a programmable pseudo-emotional response. Emotions are not modalities." Thus, Appellant concludes that claims 1 through 18 would not have been rendered obvious by the combination of Breese and Mizokawa. The issue is whether Mizokawa discloses determining preferred modalities of the user.

Claim 1 requires sensing a psychomotor behavioral element of an individual's activity and determining the preferred modalities of the individual based on the sensed psychomotor behavioral element. Modality is defined by Appellant (Specification 5) as "a mode of behavior or operation." Thus, claim 1 requires sensing a psychomotor behavioral element from a user's activity and using the sensed information to determine the user's preferred mode of behavior.

Mizokawa discloses (col. 1, ll. 9-11) "adapting, to a user, behavior of an object capable of behaving in an autonomous manner, thereby creating behavior highly responsive to the user or environment." The object to be controlled can be any type of device including a touring assist system in an automobile. (See Mizokawa, col. 2, ll. 45-57.) Mizokawa discloses (col. 2, ll. 53-60) that the device perceives its surroundings and responds. Mizokawa discloses (col. 6, ll. 46-54) a user's emotion is determined based on facial expression analysis and auditory analysis of the user. Further, the relationship between emotions, state of the user, and environmental information is determined, such as: the lower the temperature, the higher the level of user disgust; and the darker the environment, the higher level of user

fear. (*See* Mizokawa, col. 9, ll. 16-28.) According to Mizokawa (col. 15, ll. 13-24), the more the system is used, the more the device can understand the user's feelings *or preferences* and the more the device can assist the user. Behavioral responses can include whistling, traveling, and moving to a brighter place. (*See* Mizokawa, col. 20, ll. 55-57.)

Breese teaches (col. 8, ll. 11-15) that behavior that can be sensed to determine a person's emotions and personality includes gesture, expression, and body language.

The Supreme Court has held that in analyzing the obviousness of combining elements, a court need not find specific teachings, but rather may consider "the background knowledge possessed by a person having ordinary skill in the art" and "the inferences and creative steps that a person of ordinary skill in the art would employ." *See KSR Int'l v. Teleflex Inc.*, 127 S. Ct. 1727, 1740-41, 82 USPQ2d 1385, 1396 (2007). The skilled artisan, taking all of the teachings of Mizokawa and Breese together, would have recognized that if a device determines that a user's level of fear increases with darkness and that a user's level of disgust increases with temperature, then the device senses and analyzes the user's facial expressions, gestures, body language, and speech to determine the level of fear and disgust. Further, since the purpose of the device is to help the user, the device would determine that the user would prefer a lower temperature and a brighter environment and would change the temperature and either change the brightness or move to a brighter location accordingly. Specifically, in the cases of a touring assist system in a vehicle, driving when calm and content is safer and, thus, preferred over driving frightened and disgusted. Consequently, the system would determine that the user would prefer to stay

calm and content and would lower the temperature and change the brightness in the car. Thus, the device would change the temperature and brightness to conform to the preferred modalities of the user, i.e., driving in a calm manner. In other words, Mizokawa at least suggests determining preferred modalities of the user, and we will sustain the obviousness rejection of claims 1, 11, 12, and 18, which are argued together, over Breese and Mizokawa.

As to claims 2 and 3, Appellant contends (Br. 21) that the sensors in Mizokawa do not modify the environment of the user. However, as indicated *supra*, Mizokawa discloses (col. 2, ll. 46-62, col. 9, ll. 25-28, and col. 22, ll. 8-23) that the device can be a touring system in a car and can sense negative changes in the user based on environmental conditions such as temperature and brightness. It would have been obvious based on the purpose of the device for the device to change the environment (i.e., change the temperature and brightness) to the preferred modality of the user. Consequently, we will sustain the obviousness rejection of claims 2 and 3.

Regarding claim 10, Appellant contends (Br. 21) that it is unclear what the multiple dimensions of the environment are in the rejection. The modifiable units are clearly temperature and brightness, thereby making the environment multi-dimensional. Claim 13 likewise recites modifying an environmental unit to conform the environment to the preferred modality of the user, and, thus, has been addressed *supra*. Similarly, we have explained *supra* that Mizokawa suggests calculating a preferred modality (level of brightness and temperature) while sensing the user's psychomotor behavioral activity (e.g., facial expressions, along with body movement and gestures, as suggested by Breese) and using the information to modify the environment,

as recited in claims 16 and 17. Therefore, we will sustain the obviousness rejection of claims 10, 13, 16 and 17.

Appellant contends (Br. 23-24) that it is unclear how Mizokawa can store sensed information, as recited in claims 4, 14, and 15 without also sensing the information. However, Mizokawa does sense information and also must store the information, as it learns from its experiences and improves its performance accordingly. (*See* Mizokawa, col. 3, ll. 52-60.) Therefore, we will sustain the obviousness rejection of claims 4, 14, and 15.

Appellant contends (Br. 24-25) that neither reference discloses or suggests using linear algebraic transforms, as recited in claim 5. We agree. Therefore, we will reverse the rejection of claim 5.

As to claims 6 through 8, Appellant contends (Br. 28-29) that nothing in the references teaches or suggests ordering the modalities by preference thereby defining a focus of the individual's attention. Mizokawa does disclose (col. 20, ll. 33-34) that composite behavior is created by prioritizing plural behaviors. Thus, the two conditions of claim 6, a combination and prioritizing, are met. Further, as broadly interpreted, the brightness and the temperature define the "focus of the individual's attention," since the user's attention will be more on driving rather than on being upset. Thus, we will sustain the rejection of claim 6. However, we find nothing in Mizokawa about "a co-ordinate group of representational geometry to which attention of the individual is drawn" nor "a cognitive behavioral model," as recited in claims 7 and 8, respectively. Accordingly, we will reverse the obviousness rejection of claims 7 and 8.

Appellant contends (Br. 33) that neither reference discloses or suggests use of the particular equation recited in claim 9 for calculating the

combination and order of modalities. We agree. Thus, for this reason and since claim 9 depends from claim 6, we will reverse the obviousness rejection of claim 9.

ORDER

The decision of the Examiner rejecting claims 1 through 18 under 35 U.S.C. § 103 is reversed as to claims 5 and 7 through 9 and affirmed as to claims 1 through 4, 6, and 10 through 18.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

tdl/gw

HAYES, SOLOWAY P.C.
175 CANAL STREET
MANCHESTER, NH 03101